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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
FISHER, ABIGAIL L	

ART UNIT	PAPER NUMBER
1616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/563,062	PARK ET AL.	
	Examiner	Art Unit	
	ABIGAIL FISHER	1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 December 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-22,24-37 and 45-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3-22, 24-37 and 45-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/23/09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 17 2008 has been entered.

Receipt of Amendments/Remarks filed on December 17 2008 is acknowledged. Claims 2, 23 and 38-44 were/stand cancelled. Claims 1, 3-13, 16-19, 21-22, 24-27, 30-31, 37 and 45-46 were amended. Claim 47 was added. Claims 1, 3-22, 24-37 and 45-47 are pending.

Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on March 23 2009 was considered by the examiner.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 3-16, 19-22, 24-36 and 45-47 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification discloses chemicals, such as ethylene and propylene polymers, siloxane polyamides, polyesters, para-aminobenzoic acid, methoxy cinnamate, and camphor which meet the written description and enablement provisions of 35 USC 112, first paragraph. However, claim(s) 1, 3-22, 24-27 and 45-47 is(are) directed to encompass any ingredient which is adversely affected by UV light in the presence of a metal oxide, which only correspond in some undefined way to specifically instantly disclosed chemicals. None of these adversely effective ingredients, besides those specifically mentioned, meet the written description provision of 35 USC § 112, first paragraph, due to lacking chemical structural information for what they are and chemical structures are highly variant and encompass a myriad of possibilities. The specification provides insufficient written description to support the genus encompassed by the claim. **Note: MPEP 2163.**

Vas-Cath Inc. v. Mahurkar, 19 USPQ2d 1111, (Fed. Cir. 1991), makes clear that "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession *of the invention.* The invention is, for purposes of the 'written description' inquiry, *whatever is now claimed.*" (See page 1117.) The specification does not "clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." (See Vas-Cath at page 1116.)

Univ. of Rochester v. G.D. Searle, 69 USPQ2d 1886, 1892 (CAFC 2004), further supports this by stating that:

> The appearance of mere indistinct words in a specification or a claim, even an original claim, does not necessarily satisfy that requirement. A description of an anti-inflammatory steroid, i.e., a steroid (a generic structural term) described even in terms of its functioning of lessening inflammation of tissues fails to distinguish any steroid from others having the same activity or function. **A description of what a material does, rather than of what it is, usually does not suffice.... The disclosure must allow one skilled in the art to visualize or recognize the identity of the subject matter purportedly described**. (Emphasis added).

With the exception of the above specifically disclosed chemical structures, the skilled artisan cannot envision the detailed chemical structure of the encompassed adversely affected compounds regardless of the complexity or simplicity of the method of isolation. Adequate written description requires more than a mere statement that it is part of the invention and reference to a potential method for isolating it. The chemical structure itself is required. See Fiers v. Revel, 25 USPQ2d 1601, 1606 (Fed. Circ. 1993) and Amgen Inc. V. Chugai Pharmaceutical Co. Ltd., 18 USPQ2d 1016, (Fed. Cir. 1991). In Fiddes v. Baird, 30 USPQ2d 1481, 1483, (Bd. Pat. App. & Int. 1993), claims directed to mammalian FGF's were found unpatentable due to lack of written description for the broad class. The specification provided only the bovine sequence. Finally, University of California v. Eli Lilly and Co., 43 USPQ2d 1398, 1404, 1405 (Fed. Cir. 1997) held that:

> ...To fulfill the written description requirement, a patent specification must describe an invention and do so in sufficient detail that one skilled in the art can clearly conclude that "the inventor invented the claimed invention." *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1966 (Fed. Cir. 1997); *In re Gosteli*, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989) (" [T]he description must clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed."). Thus, an applicant complies with the written description requirement "by describing the invention, with all its claimed limitations, not that which makes it obvious," and by using "such descriptive means as words, structures, figures, diagrams, formulas, etc., that set forth the claimed invention." *Lockwood*, 107 F.3d at 1572, 41 USPQ2d

at 1966.

Furthermore, to the extent that a functional description can meet the requirement for an adequate written description, it can do so only in accordance with PTO guidelines stating that the requirement can be met by disclosing "sufficiently detailed, relevant identifying characteristics," including "functional characteristics when coupled with a known or disclosed correlation between function and structure." Univ. of Rochester v. G.D. Searle, 68 USPQ2d 1424, 1432 (DC WNY 2003).

Therefore, only the above chemically structurally defined chemicals, but not the full breadth of the claim(s) meet the written description provision of 35 USC § 112, first paragraph. The species specifically disclosed are not representative of the genus because the genus is highly variant. Applicant is reminded that Vas-Cath makes clear that the written description provision of 35 USC § 112 is severable from its enablement provision. (See page 1115.)

Claim 18 is additionally rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification discloses chemicals, such as para-aminobenzoic acid or ester thereof, methoxy cinnamate ester, benzophenone, dibenzoylmethane, and triazine

which meet the written description and enablement provisions of 35 USC 112, first paragraph. However, claim(s) 18 is(are) directed to encompass derivatives and silicone "based" sunscreen agents, which only correspond in some undefined way to specifically instantly disclosed chemicals. None of these derivatives and "based" agents meet the written description provision of 35 USC § 112, first paragraph, due to lacking chemical structural information for what they are and chemical structures are highly variant and encompass a myriad of possibilities. The specification provides insufficient written description to support the genus encompassed by the claim. **Note: MPEP 2163.**

Vas-Cath Inc. v. Mahurkar, 19 USPQ2d 1111, (Fed. Cir. 1991), makes clear that "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession *of the invention.* The invention is, for purposes of the 'written description' inquiry, *whatever is now claimed.*" (See page 1117.) The specification does not "clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." (See Vas-Cath at page 1116.)

Univ. of Rochester v. G.D. Searle, 69 USPQ2d 1886, 1892 (CAFC 2004), further supports this by stating that:

> The appearance of mere indistinct words in a specification or a claim, even an original claim, does not necessarily satisfy that requirement. A description of an anti-inflammatory steroid, i.e., a steroid (a generic structural term) described even in terms of its functioning of lessening inflammation of tissues fails to distinguish any steroid from others having the same activity or function. A description of what a material does, rather than of what it is, usually does not suffice.... The disclosure must allow one skilled in the art to visualize or recognize the identity of the subject matter purportedly described. (Emphasis added).

With the exception of the above specifically disclosed chemical structures, the skilled artisan cannot envision the detailed chemical structure of the encompassed **derivatives and "based" agents,** regardless of the complexity or simplicity of the method of isolation. Adequate written description requires more than a mere statement that it is part of the invention and reference to a potential method for isolating it. The chemical structure itself is required. See Fiers v. Revel, 25 USPQ2d 1601, 1606 (Fed. Circ. 1993) and Amgen Inc. V. Chugai Pharmaceutical Co. Ltd., 18 USPQ2d 1016, (Fed. Cir. 1991). In Fiddes v. Baird, 30 USPQ2d 1481, 1483, (Bd. Pat. App. & Int.

1993), claims directed to mammalian FGF's were found unpatentable due to lack of written description for the broad class. The specification provided only the bovine sequence. Finally, University of California v. Eli Lilly and Co., 43 USPQ2d 1398, 1404, 1405 (Fed. Cir. 1997) held that:

> ...To fulfill the written description requirement, a patent specification must describe an invention and do so in sufficient detail that one skilled in the art can clearly conclude that "the inventor invented the claimed invention." *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1966 (Fed. Cir. 1997); *In re Gosteli*, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989) (" [T]he description must clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed."). Thus, an applicant complies with the written description requirement "by describing the invention, with all its claimed limitations, not that which makes it obvious," and by using "such descriptive means as words, structures, figures, diagrams, formulas, etc., that set forth the claimed invention." *Lockwood*, 107 F.3d at 1572, 41 USPQ2d at 1966.

Furthermore, to the extent that a functional description can meet the requirement for an adequate written description, it can do so only in accordance with PTO guidelines stating that the requirement can be met by disclosing “sufficiently detailed, relevant identifying characteristics,” including “functional characteristics when coupled with a known or disclosed correlation between function and structure.” Univ. of Rochester v. G.D. Searle, 68 USPQ2d 1424, 1432 (DC WNY 2003).

Therefore, only the above chemically structurally defined chemicals, but not the full breadth of the claim(s) meet the written description provision of 35 USC § 112, first paragraph. The species specifically disclosed are not representative of the genus because the genus is highly variant. Applicant is reminded that Vas-Cath makes clear that the written description provision of 35 USC § 112 is severable from its enablement provision. (See page 1115.)

Claim 16 is additionally rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 16 recites that the composition contains an effective amount of a doped or reduced metal oxide sufficient to impart to the composition a rate of loss of UV absorption at leas 5% less than that of a composition having the same formulation except that it does not contain the doped reduced metal oxide. The instant specification indicates that specific percentages of metal oxides that can be included but does not specify if this amount refers to the doped or the non-doped metal oxides. Furthermore, the instant specification does not indicate that these amounts are sufficient to impart to the composition a rate of loss of UV absorption. Therefore, the instant specification does not describe which amounts would constitute an effective amount of a doped or reduced metal oxide which is sufficient to produce the desired result. The specification provides insufficient written description to support the genus encompassed by the claim.

Note: MPEP 2163.

Vas-Cath Inc. v. Mahurkar, 19 USPQ2d 1111, (Fed. Cir. 1991), makes clear that "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession *of the invention.* The invention is, for purposes of the 'written description' inquiry, *whatever is now claimed.*" (See page 1117.) The specification does not "clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." (See Vas-Cath at page 1116.)

...To fulfill the written description requirement, a patent specification must

> describe an invention and do so in sufficient detail that one skilled in the art can clearly conclude that "the inventor invented the claimed invention." *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1966 (Fed. Cir. 1997); *In re Gosteli*, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989) (" [T]he description must clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed."). Thus, an applicant complies with the written description requirement "by describing the invention, with all its claimed limitations, not that which makes it obvious," and by using "such descriptive means as words, structures, figures, diagrams, formulas, etc., that set forth the claimed invention." *Lockwood*, 107 F.3d at 1572, 41 USPQ2d at 1966.

Therefore, the claim does not meet the written description provision of 35 USC § 112, first paragraph due to lacking a description of what amounts would constitute and effective amount of a doped or reduced metal oxide sufficient to impart to the composition a rate of loss of UV absorption at leas 5% less than that of a composition having he same formulation except that it does not contain the doped or reduced metal oxide.

Claim 46 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection.

In the reply filed on May 8 2008, applicants added claim 46 which recited that the undoped and reduced metal oxide has a particle size of at least 100 nm. The instant specification provides support for particle size from 100 to 20,000 nm (page 9 of the

instant specification). However, the instant claims recite a particle size of at least 100 nm which is inclusive of all numbers greater than 100 nm. Therefore, the instant specification does not provide support for the breadth of the claimed particle size of instant claim 46.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The rejection of claims 1, 3-37 and 45-46 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is **withdrawn** in light of Applicants' amendments filed on December 17 2008 indicating that the compositions comprises both undoped and doped metal oxides.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The rejection of claims 1, 11-24, 26-29, 35 and 37 under 35 U.S.C. 102(b) as being anticipated by Mitchnick et al. (US Patent No. 5441726, cited on PTO Form 1449) is **withdrawn** in light of Applicants' amendments filed on December 17 2008 incorporating undoped and non-reduced metal oxide in the composition.

The rejection of claims 1, 3-5, 7-8, 11, 16-20, 26-35 and 37 under 35 U.S.C. 102(b) as being anticipated by Chopoorian (US Patent No. 3314321, cited on PTO Form 1449) is **withdrawn** in light of Applicants' amendments filed on December 17 2008 incorporating undoped and non-reduced metal oxide in the composition.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Applicant Claims
2. Determining the scope and contents of the prior art.
3. Ascertaining the differences between the prior art and the claims at issue, and resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 10-22, 24, 26-29, 35-37 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchnick et al. (US Patent No. 5441726, cited on PTO Form 1449).

Applicant Claims

Applicant claims a composition comprising (i) an ingredient which is adversely affected by UV light in the presence of titanium dioxide and/or zinc oxide, (ii) an amount of titanium dioxide and/or zinc oxide which is doped with one or more elements and/or reduced zinc oxide and (iii) an undoped and non-reduced metal oxide selected from titanium dioxide, zinc oxide, or mixtures thereof.

A dependent claim is that the composition is coated with an organic coating.

A dependent claim indicates that the composition is in the form of a paint or varnish. A dependent claim indicates that the composition is in the form of a sunscreen or cosmetic use.

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

Applicants have stated that an organic component which may be degraded is generally a UV sunscreen agent (specification, page 4, lines 5-6).

Applicants have defined polymeric composition to mean a composition which comprises one or more polymeric materials (specification, page 12, lines 25-27).

Mitchnick et al. discloses two ways of preparing zinc oxide particles. One way is through doped zinc oxide particles (figure 5 and column 9, lines 40-68). These particles are then exemplified as being utilized in sunscreen creams, emulsions (examples of column 12). The first example is an emulsion comprising the zinc oxide and octyl methoxycinnamate (an organic sunscreen). This emulsion comprises 5% of the doped zinc oxide and 7.5% octyl methoxycinnamate. The emulsion additionally comprises dimethicone (a silicone polymer). It is disclosed that the rods having a length of less than 300 nm are optimal to confer transparency to the composition. An example of such a composition is a sunscreen, of which several formulations are provided (column 10-11, lines 65-68 and 1-3). The dopants include Bi and aluminum (column 10). Mitchnick et al. discloses that the zinc oxide may be combined with other metal oxides such as titanium oxides (column 11, lines 6-9). The second sunscreen formulation exemplifies using microfine titanium dioxide in combination of zinc oxide. The zinc oxide may be surface modified in order to make them more compatible in a given formulation. One example of a surface modification is a silicone-like compound in order to increase the zinc oxides compatibility with oil-based formulations (column 11, lines 17-21). One example includes an opaque paint. It is disclosed that coating inanimate objects result in material that is more resistant to the fading brought on by exposure to UV light (column 4, lines 30-34). It is taught that generally sunscreen lotions contain water, emulsifier zinc and/or titanium oxides and a UVB absorber (column 11, lines 25-26).

Ascertainment of the Difference Between Scope the Prior Art and the Claims (MPEP §2141.012)

While Mitchnick et al. teach and exemplify formulations comprising the zinc rods with titanium dioxide or octyl methoxycinnamate, Mitchnick et al. do not exemplify a formulation comprising all three. While, Mitchnick et al. indicates that the zinc oxide rods may be surface modified, Mitchnick et al. does not exemplify utilizing titanium dioxide and/or zinc oxide that are coated with an organic solvent. While Mitchnick et al. indicate that the zinc rods can be utilized in paint formulations, Mitchnick et al. does not exemplify a paint formulation comprising organic components.

Finding of Prima Facie Obviousness Rational and Motivation (MPEP §2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to utilize formulations comprising the doped zinc oxide rods, titanium dioxide and octylmethoxycinnamate. One of ordinary skill in the art would have been motivated to formulate a composition comprising these three ingredients as they are all taught as being suitable for the same purpose (i.e. UV protection) and combinations are exemplified. Furthermore, with regard to sunscreens and cosmetics Mitchnick et al. teach that generally these types of products include zinc and/or titanium oxides and UVB absorber. Therefore, Mitchnick et al. suggests the use of all three in compositions. In the use as paint formulations, since they are designed to protect the coated product from UV exposure, it would have been obvious to one of ordinary skill in the art to add UV protecting ingredients such as octyl methoxycinnamate and titanium dioxide in order to impart resistant to the fading brought on by exposure to UV light as taught by

Mitchnick et al. As a general principle it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose, the idea of combining them flows logically from their having been individually taught in the prior art. See *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) **MPEP 2144.06.**

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to utilize particles that had been coated with an organic solvent. One of ordinary skill in the art would have been motivated to coat the particles because Mitchnick et al. discloses that surface modified make them more compatible in a given formulations. Therefore depending on the desired formulation of the particles to be used, making the particles coated makes them more compatible with the formulations.

With regard to the functional limitations pertaining claim 16, claim 19, claim 20, and claims 27-29, Mitchnick et al. discloses the same claimed composition comprising organic components and doped zinc oxide. Note MPEP 2112.02 (1I): "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. In re Spada, 911 F.2d 705,709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Regarding claim 35, since Mitchnick et al. discloses the composition as a sunscreen composition, it would necessarily be a coating composition and subsequently reads on the instant claim.

Regarding claim 37, octyl methoxycinnamate is an ethylenically unsaturated compound and subsequently reads on the instant claim.

Absent any evidence to the contrary, and based upon the teachings of the prior art, there would have been a reasonable expectation of success in practicing the instantly claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Response to Arguments

Applicants' argue that (1) there are no examples or data that shows any benefit of doping and there is no explicit reference to combing doped zinc oxide with non-doped titanium dioxide as is instantly claimed. Applicants' argue that (2) there is no examples that contain non-doped zinc oxide and either an organic sunscreen agent or non-doped titanium dioxide.

Applicant's arguments filed December 17 2008 have been fully considered but they are not persuasive.

Regarding applicants' first argument, Mitchnick et al. clearly teach that the zinc oxide rods can be doped. Figure 5 explicitly teaches how one of ordinary skill in the art would form the doped zinc oxide. The zinc oxide particles taught by Mitchnick et al. are

either non-doped, which can be long or short, and doped zinc oxide. Therefore, Mitchnick et al. only teaches two types of zinc oxide rods, doped or un-doped and one of ordinary skill in the art could immediately envision utilizing either one. While, Mitchnick et al. do not exemplify a formulation comprising doped zinc oxide rods, octyl methoxycinnamate, and titanium dioxide, the examiner argues above that it would have been obvious to one of ordinary skill in the art to utilize all three as all three are taught as UV sun screening agent and are therefore taught as being suitable for the same purpose.

Regarding applicants' second argument, the examiner is confused by this argument. The instant claims require an ingredient which is adversely affected, a doped or reduced metal oxide and an undoped or non-reduced metal oxide. The instant claims indicate that the metal oxides which can be doped include titanium dioxide or zinc oxide and the metal oxide which can be undoped is titanium dioxide or zinc oxide. Therefore, the instant claims require one doped and one un-doped. That combination can be doped zinc oxide and undoped titanium dioxide. Therefore, the presence of non-doped zinc oxide and non-doped titanium dioxide is not required by the instant claims.

Claims 9, 25 and 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchnick et al. in view of Knowland et al. (WO 99/60994, cited on PTO Form 1449).

Applicant Claims

A dependent claim indicates that reduced zinc oxide is present. A dependent claim is that undoped metal oxide has a particle size of at least 100 nm. A dependent claim is that the doped metal oxide is coated with an inorganic coating which is an oxide of aluminum, zirconium or silicon.

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

The teachings of Mitchnick et al. are set forth above. Mitchnick et al. teach utilizing doped zinc oxide rods in sunscreen, cosmetic, and paint formulations. It is taught that these formulations can include other sun screening agents such as titanium dioxide and UVB absorbers such as octyl methoxycinnamate. Mitchnick et al. teach that the zinc oxide rods may be surface modified in order to make them more compatible in a given formulation.

Ascertainment of the Difference Between Scope the Prior Art and the Claims (MPEP §2141.012)

Mitchnick et al. do not specify utilizing an inorganic coating on the doped particles. Mitchnick et al. do not specify the particle size of the titanium dioxide. Mitchnick et al. does not disclose utilizing reduced zinc oxide. For this reason Knowland et al. is relied upon.

Knowland et al. teaches UV screening compositions comprising particles capable of absorbing UV light. The particles may be reduced zinc oxide particles (page 4, lines 6-8). The particles may also be titanium or zinc oxide that has been doped with nickel, iron, chromium, aluminum, manganese, among others (page 5, lines 1-7). It is taught that titanium dioxide can be utilized in paints, plastics, coatings, pigments, dyes and

sunscreens. It is taught that compositions which contain the doped particles can also contain other metal oxide pigments. These pigments have a particle size from 100 nm to 20000 nm (page 6, lines 16-23). It is taught that the particles can be coated with an inorganic or organic coating. These particles can be coated with oxides of elements such as aluminum zirconium or silicon (inorganic coatings) or organic material such as polymeric organic silicon compounds (organic coatings) (page 5, lines 25-31).

Finding of Prima Facie Obviousness Rational and Motivation (MPEP §2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of Mitchnick et al. and Knowland et al. and utilize reduced zinc oxide in the sunscreen formulations of Mitchnick et al. One of ordinary skill in the art would have been motivated to utilize these particles as they are disclosed in Knowland et al. as being other suitable doped particles for use in sunscreen compositions. Therefore one of ordinary skill in the art would have a reasonable expectation that these particles would function the same as the doped zinc oxide of Mitchnick et al.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of Mitchnick et al. and Knowland et al. and utilize an inorganic coating on the doped zinc oxide. One of ordinary skill in the art would have been motivated to utilize an inorganic coating on the doped zinc oxide as Mitchnick et al. teach that the rods maybe surface modified in order to make them more compatible in a given formulation and teach an organic coating. Knowland et al. teach that similar particles can be coated with an inorganic coating or organic coating. It

would have been obvious to one of ordinary skill in the art to vary the coating depending on the desired surface modification desired.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of Mitchnick et al. and Knowland et al. and utilize titanium dioxide in a particle size range form 100 nm to 20000 nm. One of ordinary skill in the art would have been motivated to utilize this particle size and Knowland et al. teach that in addition to doped particles that other metal oxides can be incorporated into sunscreen and the like formulations which possess a particle size with a range from 100 nm to 20000 nm. It would have been obvious to one of ordinary skill in the art to manipulate the particle size in order to vary the transparency of the sunscreen formulation as well as the coverage desired.

Absent any evidence to the contrary, and based upon the teachings of the prior art, there would have been a reasonable expectation of success in practicing the instantly claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Claims 1, 3-8, 11, 16-21, 26-35, 37 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chopoorian (US Patent No. 3314321, cited on PTO Form 1449) in view of Feist et al. (US PGPUB No. 20020094455).

Applicant Claims

Applicant claims a composition comprising (i) an ingredient which is adversely affected by UV light in the presence of titanium dioxide and/or zinc oxide, (ii) an amount of titanium dioxide and/or zinc oxide which is doped with one or more elements and/or reduced zinc oxide and (iii) an undoped and non-reduced metal oxide selected from titanium dioxide, zinc oxide, or mixtures thereof.

The dopant is present in an amount from or 0.5 to 2 mole %.

A dependent claim indicates that the composition contains a UV sunscreen agent.

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

Applicants have indicated that components which are adversely affected by titanium dioxide and/or zinc oxide are those which are sensitive to free radical attack. Such components include large molecules such as polymers as well as small molecules such as those with ethylenic unsaturation or those which posses a labile hydrogen atom (specification, page 3, lines 9-13).

Chopoorian is directed to a photochromatic composition comprising inorganic metal oxides suspended in polyester binders. Examples 6 and 7 comprise a polyester resin produced from maleic anhydride, phthalic anhydride, and propylene glycol. It is indicated that these resins contain ethylenic unsaturation (column 5, lines 24-25). Therefore these resins are those ingredients which are adversely affected by UV light in the presence of titanium dioxide and/or zinc oxide. The composition also comprises titanium dioxide that is doped with 0.2% manganese. The doped metal oxide is present in 20% by weight. It is disclosed that these composition have many uses some include

temporary photographic proofs (e.g. photographic film) (column 9, lines 21-24). It is disclosed that the polyester resins are thermoplastic and thermosetting (column 1, lines 46-47). It is disclosed that the rutile form of the titanium dioxide is sufficient (column 3, lines 49-50). Additionally, it is indicated that the admixtures contain from about 0.01 to 5 mole% of the doping guest oxide (column 3, lines 53-55). It is also indicated that it is possible to lengthen the life of the composition by incorporating various ultraviolet light absorbers into them . These additives include UV absorbers such as 2-hydroxy benzophenone (column 9, lines 30-40). When these absorbers are added they are present in amount up to 20% by weight (column 9, lines 43-45). A third class of photochromic inorganic oxide material is admixtures of titanium dioxide with MoO_3 or WO_3. The titanium dioxide component may either be rutile, anatase, or a mixed phase form. In place of titanium dioxide other metal oxides may be utilized such as zinc oxide (column 4, lines 30-43 and Table 1). It is taught that the compositions of the invention have many uses which include memory devices, devices for temporary data storage, temporary photographic proofs, light storage, optical masks, etc. (column 9, lines 20-26). It is taught that the composition can comprises modifiers, fillers, lubricants, stabilizers, plasticizers, colorants or the like may be included (column 9, lines 3-6).

Ascertainment of the Difference Between Scope the Prior Art and the Claims (MPEP §2141.012)

Chopoorian does not exemplify utilizing titanium dioxide that is doped in different percentages. Chopoorian does not exemplify utilizing UV absorbers in the composition of matter. Chopoorian does not specify the incorporation of titanium dioxide or zinc oxide that is not doped. However, this deficiency is cured by Feist et al.

Feist is directed to a data storage media. It is taught that the data storage media can be produced by first forming a thermoplastic composition and then mixing the various components (paragraph 0035). Once the composition has been produced it can be used to form data storage media or any other desired articles (films, lenses, sheets, etc.) using various molding and processing techniques (paragraph 0037). It is taught that reinforcing agents, fillers and other additives can be used to increase the modulus of the substrate. Fillers and reinforcing agents include titanium dioxide, glass, zinc oxide, zinc sulfide, etc. (paragraph 0034).

Finding of Prima Facie Obviousness Rational and Motivation (MPEP §2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of Chopoorian and Feist and utilizing fillers and reinforcing agents such as titanium dioxide and zinc oxide in the composition of Chopoorian. One of ordinary skill in the art would have been motivated to add these fillers and reinforcing agents as Chopoorian teach that these types of agents can be added and Feist et al. teach their use in similar type products which can be added in order to increase the modulus of the substrate. Therefore, it would have been obvious to one of ordinary skill in the art to add titanium dioxide or zinc oxide in order to increase the modulus of the substrate based on the teachings of Feist et al.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to utilize a dopant in an amount from about 0.01 to 5 mole% . One of ordinary skill in the art would have been motivated to select this range because it is disclosed by Chopoorian as being suitable. Therefore one of ordinary skill in the art

would have a reasonable expectation that these particles would function effectively with this particular amount of dopant.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include UV absorbers in the compositions of matter of Chopoorian. One of ordinary skill in the art would have been motivated to include this type of ingredient because Chopoorian indicates that the inclusion of these types of ingredients may lengthen the life of the compositions.

With regard to the functional limitation pertaining to claim 16, claim 19, claim 20, and the ingredient which is adversely affected by titanium dioxide and/or zinc oxide suffers a change in physical properties (claims 27-29), Chopoorian discloses the same claimed organic components and doped zinc oxide. Note MPEP 2112.02 (1I): "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. In re Spada, 911 F.2d 705,709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Regarding claim 35, the mixture that is formed from the resin and doped metal oxide, is poured between glass plates (see example 1), therefore it coats the glass plates. This makes the mixture a coating composition and therefore reads on the instant claim.

Absent any evidence to the contrary, and based upon the teachings of the prior art, there would have been a reasonable expectation of success in practicing the instantly claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Response to Arguments

Applicants' argue that Chopoorian does not recite the presence of non-doped titanium dioxide and zinc oxide and therefore newly amended claim 1 is distinguished over Chopoorian.

Applicant's arguments filed December 17 2008 have been fully considered but they are not persuasive.

While Chopoorian does not specify the inclusion of non-doped titanium dioxide or zinc oxide, the inclusion of these components would have been obvious based on the teachings of Feist et al. as set forth above,

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.

1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 4-22, 24-29 and 45-47 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-25 of copending Application No. 10/540649 (US PGPUB No. 2006/0134026). Although the conflicting claims are not identical, they are not patentably distinct from each other because they overlap in scope.

The instant application claims a composition comprising (i) an ingredient which is adversely affected by UV light in the presence of titanium dioxide and/or zinc oxide, (ii) an amount of titanium dioxide and/or zinc oxide which is doped with one or more elements and/or reduced zinc oxide and (iii) an undoped and non-reduced metal oxide selected from titanium dioxide, zinc oxide, or mixtures thereof.

Copending '649 claims a sun screening composition comprising an amount of one or more organic components which are photosensitive and/or which degrade and/or in which degradation is induced by another ingredient of the composition and effective amount of titanium dioxide which is doped. A depending claim indicates that the composition further comprises titanium dioxide and/or zinc oxide which are not doped.

Both applications are directed to composition which comprises doped titanium dioxide and/or zinc oxide and/or reduced zinc oxide and non-doped titanium dioxide and zinc oxide. Copending '649 claims an organic component while the instant application claims an ingredient which is adversely affected by UV light in the presence of titanium dioxide and/or zinc oxide. A particular species of organic component as well as ingredient which is adversely affected is a UV sunscreen agent. Copending '649 claims all the instant limitations in the dependent claims.

Therefore, both the instant application and '649 are directed to similar subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

Applicants argue that instant claims recite non-doped titanium dioxide or zinc oxide which differentiates it from the copending application.

Applicants' arguments filed December 17 2008 have been fully considered but they are not persuasive.

As indicated above copending '649 claims the inclusion of non-doped titanium dioxide and zinc oxide, therefore the scopes of the copending and the instant application overlap.

Claims 1, 3-22, 24-36 and 45-47 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 8, 10-12, 16-20, 24-32, 34, 36, 50-52, and 54-55 of copending Application No. 10/588071 (USPGPUB No. 20080031832) in view of Mitchnick et al. Although the conflicting claims are not identical, they are not patentably distinct from each other because they overlap in scope.

The instant claims are set forth above.

Copending '071 claims a UV sunscreen composition comprising one or more organic components which are photosensitive and/or which are susceptible to degradation by another ingredient and comprises titanium dioxide or zinc oxide which is doped. Copending '071 claims all the instant limitations in the dependent claims.

Copending '071 does not claim the addition of titanium dioxide or zinc oxide which is not doped. However, this deficiency is cured by Mitchnick et al.

Mitchnick et al. teach that generally sunscreen lotions comprise water, emulsifier, zinc and/or titanium oxides and a UVB absorber (column 11, lines 25-26).

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of copending '071 and Mitchnick et al. and non-doped titanium dioxide or non-doped zinc oxide. One of ordinary skill in the art would have been motivated to add these metal oxides as they are taught in the art as sunscreen agent typically utilized in sunscreen lotions. Since copending '071 is directed to sunscreen compositions, it would have been obvious to one of ordinary skill in the art

to add these metal oxides as they are known to be utilized for the same purpose as the claimed compositions of copending '071.

Therefore, both the instant application and '071 are directed to similar subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

Applicants argue that instant claims recite non-doped titanium dioxide or zinc oxide which differentiates it from the copending application.

Applicants' arguments filed December 17 2008 have been fully considered but they are not persuasive.

While copending '071 does not claim the inclusion of non-doped titanium dioxide and zinc oxide, base don the teachings of Mitchnick et al. it would have been obvious to one of ordinary skill in the art to add them.

Claims 1 and 3-22, 24-36 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-14, 16-23, 27, 28, of copending Application No. 10/555570 (US PGPUB No. 20070055000). Although the conflicting claims are not identical, they are not patentably distinct from each other because they overlap in scope.

The instant claims are set forth above.

Copending '570 claim a composition comprising an amount of one or more organic or inorganic comments which are photosensitive and/or which are degraded by another ingredient of the composition and effective amount of a stabilizing material which is selected from titanium dioxide with is doped, zinc oxide which is doped or reduced zinc oxide. A dependent claim indicates that the composition additionally comprises titanium dioxide or zinc oxide which is not doped. The composition of copending '570 comprises organic or inorganic components which are degraded by another ingredient of the composition. The instant application claims an ingredient which is adversely affected by UV light in the presence of titanium dioxide and/or zinc oxide. A particular species of organic component as well as ingredient which is adversely affected is a UV sunscreen agent. Copending '570 claims all the instant limitations in the dependent claims.

Therefore, both the instant application and '071 are directed to similar subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

Applicants argue that instant claims recite non-doped titanium dioxide or zinc oxide which differentiates it from the copending application.

Applicants' arguments filed December 17 2008 have been fully considered but they are not persuasive.

As indicated above copending '570 claims the inclusion of non-doped titanium dioxide and zinc oxide, therefore the scopes of the copending and the instant application overlap.

Claims 1, 3-22, 24-25 and 45-47 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-14, 16-17, and 20-21 of copending Application No. 11/054188 (US PGPUB No. 20050169957) and 11/207408 (US PGPUB No. 20060039857) in view of Mitchnick et al.

The instant claims are set forth above.

Copending '188 and '408 claims a UV screening composition comprising particles. The particles as claimed include a reduced zinc oxide, or zinc oxide and titanium dioxide with a second component. The second components overlap with the dopants of the instant application.

Copending '188 and '408 do not claim that sunscreen agent can be added. Copending '188 and '408 does not claim the composition is in the form of a lotion, gel, etc. or that the particles can be coated. Copending '188 and '408 do not claim the addition of non-doped titanium dioxide or zinc oxide. However these deficiencies are cured by Mitchnick et al.

Mitchnick et al. indicates that when formulating these particles into a sunscreen composition that other sunscreen components can be added (column 11, lines 54-56). Mitchnick et al. indicates that the preparation of sunscreens in the form of creams and lotions is well known in the art (column 11, lines 49-50). The zinc oxide may be surface modified in order to make them more compatible in a given formulation. One example is silicone-like compound in order to increase the zinc oxides compatibility with oil-based formulations (column 11, lines 17-21). Mitchnick et al. teach that generally sunscreen lotions comprise water, emulsifier, zinc and/or titanium oxides and a UVB absorber (column 11, lines 25-26).

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of copending '188 and '408 and Mitchnick et al. and non-doped titanium dioxide or non-doped zinc oxide. One of ordinary skill in the art would have been motivated to add these metal oxides as they are taught in the art as sunscreen agent typically utilized in sunscreen lotions. Since copending '188 and '408 is directed to sunscreen compositions, it would have been obvious to one of ordinary skill in the art to add these metal oxides as they are known to be utilized for the same purpose as the claimed compositions of copending '188 and '408.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to formulate the UV screening composition of '188 and '408 in to a cream or lotion as it was known that these are well known forms of sunscreens. It would have been obvious to one of ordinary skill in the art to utilize coated particles. One of ordinary skill in the art would have been motivated to coat the particles because

Mitchnick et al. discloses that surface modified make them more compatible in a given formulations. Therefore depending on the desired formulation of the particles will be used, making the particles coated makes them more compatible with the formulations.

This is a provisional obviousness-type double patenting rejection.

Response to Arguments

Applicants argue that instant claims recite non-doped titanium dioxide or zinc oxide which differentiates it from the copending application.

Applicants' arguments filed December 17 2008 have been fully considered but they are not persuasive.

While copending '188 and '408 do not claim the inclusion of non-doped titanium dioxide and zinc oxide, based on the teachings of Mitchnick et al. it would have been obvious to one of ordinary skill in the art to add them.

Claims 1, 3-6,10-29 and 45 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4, 7-8, and 10 of U.S. Patent No. 6869596 in view of Mitchnick et al.

The instant claims are set forth above.

Patent '596 claims a UV screening composition comprising zinc oxide particles incorporating manganese or chromium. The and/or language of the instant application indicates that the only particles present may be doped zinc oxide. Therefore the particles are the same between the two.

Patent '569 does claim that sunscreen agent can be added therefore it would have been obvious to one of ordinary skill in the art to include them in the UV screening compositions.

Patent '596 does not claim the composition is in the form of a lotion, gel, etc. or that the particles can be coated. Patent '596 does not claim the addition of non-doped zinc oxide or titanium dioxide. However, these deficiencies are cured by Mitchnick et al.

Mitchnick et al. indicates that the preparation of sunscreens in the form of creams and lotions is well known in the art (column 11, lines 49-50). The zinc oxide may be surface modified in order to make them more compatible in a given formulation. One example is silicone-like compound in order to increase the zinc oxides compatibility with oil-based formulations (column 11, lines 17-21). Mitchnick et al. teach that generally sunscreen lotions comprise water, emulsifier, zinc and/or titanium oxides and a UVB absorber (column 11, lines 25-26).

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of Patent '596 and Mitchnick et al. and non-doped titanium dioxide or non-doped zinc oxide. One of ordinary skill in the art would have been motivated to add these metal oxides as they are taught in the art as sunscreen agent typically utilized in sunscreen lotions. Since Patent '596 is directed to sunscreen compositions, it would have been obvious to one of ordinary skill in the art to add these metal oxides as they are known to be utilized for the same purpose as the claimed compositions of Patent '596.

It would have been obvious to one of ordinary skill in the art to formulate the UV screening composition of '596 in to a cream or lotion as it was known that these are well known forms of sunscreens. It would have been obvious to one of ordinary skill in the art to utilize coated particles. One of ordinary skill in the art would have been motivated to coat the particles because Mitchnick et al. discloses that surface modified make them more compatible in a given formulations. Therefore depending on the desired formulation of the particles will be used, making the particles coated makes them more compatible with the formulations.

Response to Arguments

Applicants argue that the final rejection was not proper as a new ground of rejection was present, due to the typographical error of the patent No. written in the double patenting rejection. Applicants argue what the Examiner should withdraw the finality of the rejection and refund the fee for the filing of the accompanying RCE.

Applicants' arguments filed December 17 2008 have been fully considered but they are not persuasive.

While the examiner acknowledges the typographical error of the patent number, the non-final rejection clearly indicated the subject matter of the patent recited in the double patenting rejection. However, since applicants have filed a Request for Continued Examination, the finality of the Office action is necessarily withdrawn and prosecution continues (Note: MPEP 324). Therefore, applicants' arguments are moot as to the withdrawal of the finality of the previous Office action.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ABIGAIL FISHER whose telephone number is (571)270-3502. The examiner can normally be reached on M-Th 9am-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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